BEFORE THE ARIZONA MEDICAL BOARD

In the Matter of **STEVE PI-HSIUNG CHOW, M.D.** Holder of License No. **31428** For the Practice of Allopathic Medicine In the State of Arizona.	Board Case No. MD-05-0781A **FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER** (Letter of Reprimand)

The Arizona Medical Board ("Board") considered this matter at its public meeting on October 12, 2006. Steve Pi-Hsiung Chow, M.D., ("Respondent") appeared with legal counsel Paul J. Giancola before the Board for a formal interview pursuant to the authority vested in the Board by A.R.S. § 32-1451(H). The Board voted to issue the following Findings of Fact, Conclusions of Law and Order after due consideration of the facts and law applicable to this matter.

FINDINGS OF FACT

1. The Board is the duly constituted authority for the regulation and control of the practice of allopathic medicine in the State of Arizona.

2. Respondent is the holder of License No. 31428 for the practice of allopathic medicine in the State of Arizona.

3. The Board initiated case number MD-05-0781A when Respondent filed his 2005 license renewal application and reported a medical malpractice settlement paid on his behalf regarding his care and treatment of a thirty-nine year-old male patient ("BC"). BC was chronically ill with diabetes, hypertension, and end stage renal disease, was on hemodialysis and was recently diagnosed with disseminated coccidioidomycosis. Respondent provided general endotracheal anesthesia to BC for a surgical incision and drainage of a knee abscess. There was a delay in transferring BC to the recovery room, during which time BC was unmonitored. BC

suffered a cardiac arrest and, despite initial resuscitation and prolonged hospitalization, remained comatose and failed to demonstrate signs of viable brain activity.

4. Respondent testified he gave BC a reversal agent for muscle relaxant at the end of the surgical procedure after he determined it could be reversed and then turned off the ventilator and started Am-bagging BC until he resumed spontaneous respiration. Even though BC was able to breathe well on his own (judging by the movement of the breathing bag) Respondent was not able to arouse BC, and therefore, he left the endotracheal tube in. In preparation for moving BC to the recovery room Respondent disconnected the monitors and BC was moved from the operating room ("OR") table to the gurney. When Respondent was ready to exit the room he was informed the nurse assigned to care for BC had not come back to the floor, but would be coming right back in a minute. Respondent testified that during the ensuing waiting period of minutes, BC's breathing became more labored and he subsequently went into arrest. Respondent regretted he did not immediately reconnect the monitors when he learned there was an unanticipated delay in moving BC from the OR to the recovery room and, had he been informed of this, he would have left BC on the OR table with all the monitors attached.

5. Respondent routinely uses nerve stimulators if he uses a muscle relaxant, however, he has never been in the habit of writing down the dosage of such device until recently. Use of a nerve stimulator is standard practice for Respondent and he testified it is also standard for most practitioners in the country, however, it is not the standard of the American Society of Anesthesia ("ASA") as of October 2005. Respondent testified the ASA standard of care also states that a patient receiving anesthesia shall have the EKG continuously displayed from the beginning of anesthesia until preparing to leave the anesthetizing location. Respondent testified there was a gap in record keeping of the vital signs because he was busy resuscitating BC and was not able to record vital signs properly and to improperly document them just for the sake of chart completeness is wrong.

6. Respondent practiced in New York for twelve and one-half years in private practice and the event with BC occurred on his very first day at the hospital in California. Respondent agreed the ASA standard of basic anesthetic monitoring is valid. BC was listed as "ASA 4" with ASA 1 being normal; ASA 2 mild systemic disease; ASA 3 severe systemic disease; ASA 4 severe systemic disease that is a constant threat to the life of patient; ASA 5 is a moribund patient not expected to survive without surgery; and, ASA 6 is a patient declared brain dead for organ donation purposes.

7. The Board directed Respondent to his anesthesia chart where he circled multiple things, including using a blood pressure cuff, oximeter, eye care, and end-tidal CO2. The Board confirmed Respondent used the peripheral nerve stimulator and stethoscope, but did not write it down. Respondent testified in his previous practice he never had a space to circle all these things and it was his first day at the facility and he was not familiar with this type of chart and did not recognize what "P" and "S" stood for on this form because he typically used the words "nerve stimulator." The Board asked why Respondent classified BC as ASA 4. Respondent testified he did so because of BC's conditions as outlined above. The Board asked the airway management options in a patient who is having an abscess of a lower extremity drained. Respondent testified he could do a spinal block as well and at that time he could not communicate with BC. The Board asked what the airway management options were under a general anesthetic. Respondent testified he could consider using the LMA, but he decided not to use that because he had been forewarned by the nurse that this particular surgeon could drag on and on and there was a concern about BC's diabetes with decrease in the esophageal sphincter tone. The Board confirmed BC did not have GERD and Respondent chose Zemuron over succinylcholine. BC's potassium was 5.3 and the Board asked if succinylcholine could cause a dangerous rise in potassium. Respondent agreed it could and stated the 5.3 was quite high and could increase up to 6.3 and cause severe cardiac arrhythmia. The Board asked if Respondent was aware of the

risk of using a non-polarizing agent that was excreted by the kidneys in a renal failure patient, and if so, would it not be prudent to use some means of assessing the relaxant. Respondent was aware of the risk and could not show on the chart that he used a means of assessing the relaxant, but it is his routine to do so and he also used the muscle relaxant reversing agent but, without a nerve stimulator, he would not know the depths of relaxation at the time of reversal.

8. The Board directed Respondent to the record for the start of anesthesia and noted there was no intubation sequence, tube size, or any comment about difficulty in intubation. Respondent testified he usually writes down the tube size and does not recall why he did not in this case and, if there was difficulty, he would have written that down. The anesthesia began at 1337 and the surgery ended at 1450. BC's blood pressure began at 200 over 115 and his pulse was around 110. There was a rather consistent downward trend of blood pressure and pulse to where the blood pressure at the end of the case was below a systolic of 100 and diastolic was below 60 and the heart rate somewhere between 60 and 80. The Board asked if Respondent considered BC a stable patient at the conclusion of the procedure. Respondent testified in retrospect he would agree something was amiss. After the conclusion of the procedure Respondent did not record any vital signs and there is no ventilatory documentation. Respondent documented giving the Tensilon and atropine, but there is no commentary concerning the adequacy of ventilation. There is additional writing on the chart, but it is unclear whether it was written at the time of the code or after the code.

9. The Board asked why Respondent did not put the monitors back on when he was informed there would be a delay in transferring BC. Respondent testified the thirty minute gap in the record includes after he disconnected the monitor, moved BC from the OR table to the gurney and the code. Respondent thought the waiting period for the recovery room was about five to seven minutes and the subsequent resuscitation, with the A-line and other medication, and taking BC to the OR or ICU was the thirty minute gap. However, the record reflects surgery ended at

1415 and this is the time of the last vital sign entry and the code started at 1438. T he Board asked how Respondent knew BC was okay during this period of time. Respondent could not answer the question directly, but to the best of his recollection the waiting period after disconnection was about five or seven minutes, and if he did not report the time between that and the code start, that is the gap in the record. Respondent testified the time noted for the end of surgery usually means when the incision is closed and there were other things done, like putting on the dressing. The Board asked what was going on with BC between 1415, when Respondent turned off the monitors, and 1438 when the code was initiated. Respondent could not answer the question and suggested the sequence on the chart is off a bit.

10. In his written response to the Board Respondent surmised BC's events were possibly related to sepsis. The Board asked what clinical signs of sepsis Respondent saw during the case and immediately following. Respondent testified the blood pressure was falling and sepsis was possible because the surgeon had just drained the infectious tissue. The Board asked if it would not have been more imperative for him to be more diligently monitoring BC if he suspected BC had sepsis. Respondent testified he was not thinking of sepsis at the time and only in retrospect does he think BC may have been septic. The Board asked if it was normal for Respondent to see a patient come in with a blood pressure of 200 and at the end of one half-hour see a systolic blood pressure below 90. Respondent testified BC looked, just by examining his eyes, as if he were in pain from the inflammatory tissue in the knees and was not hypotensive.

11. BC was an ASA Class 4 patient with severe systemic disease who was unconscious at the end of the case and remained intubated. he Board asked why then did Respondent remove the monitors for such a long period of time until the pre-arrest state when he put them back on. To the best of Respondent's recollection the waiting period was not that long and was only five or seven minutes before BC's trouble was noticed. The record reflects a longer period.

12. The standard of care required appropriate monitoring of an anesthetized patient including, among other things, EKG, pulse oximetry, and end-tidal CO2.

13. Respondent deviated from the standard of care because he did not appropriately monitor BC after completion of the surgical procedure.

14. BC underwent respiratory arrest and possible cardiovascular compromise.

15. Respondent is required to maintain adequate records including, at a minimum, adequate information to identify the patient, support the diagnosis, justify the treatment, accurately document the results, indicate advice and cautionary warnings provided to the patient and provide sufficient information for another practitioner to assume continuity of the patient's care at any point in the course of treatment. Respondent's records were inadequate because there was no intubation sequence and no comment on the nerve stimulator.

CONCLUSIONS OF LAW

1. The Arizona Medical Board possesses jurisdiction over the subject matter hereof and over Respondent.

2. The Board has received substantial evidence supporting the Findings of Fact described above and said findings constitute unprofessional conduct or other grounds for the Board to take disciplinary action.

3. The conduct and circumstances described above constitutes unprofessional conduct pursuant to A.R.S. § 32-1401(27)(e) ("[f]ailing or refusing to maintain adequate records on a patient"); 32-1401(27)(q) ("[a]ny conduct or practice which is or might be harmful or dangerous to the health of the patient or the public"); and 32-1401(27)(ll) ("[c]onduct that the board determines is gross negligence, repeated negligence or negligence resulting in harm to or the death of a patient").

ORDER

Based upon the foregoing Findings of Fact and Conclusions of Law,

IT IS HEREBY ORDERED:

Respondent is issued a Letter of Reprimand for failure to appropriately monitor an anesthetized patient resulting in a respiratory arrest and possible cardiovascular compromise and for failure to maintain adequate records.

RIGHT TO PETITION FOR REHEARING OR REVIEW

Respondent is hereby notified that he has the right to petition for a rehearing or review. The petition for rehearing or review must be filed with the Board's Executive Director within thirty (30) days after service of this Order. A.R.S. § 41-1092.09(B). The petition for rehearing or review must set forth legally sufficient reasons for granting a rehearing or review. A.A.C. R4-16-103. Service of this order is effective five (5) days after date of mailing. A.R.S. § 41-1092.09(C). If a petition for rehearing or review is not filed, the Board's Order becomes effective thirty-five (35) days after it is mailed to Respondent.

Respondent is further notified that the filing of a motion for rehearing or review is required to preserve any rights of appeal to the Superior Court.

DATED this 7th day of December, 2006.

THE ARIZONA MEDICAL BOARD

By _____
TIMOTHY C. MILLER, J.D.
Executive Director

ORIGINAL of the foregoing filed this 8th day of December, 2006 with:
Arizona Medical Board
9545 East Doubletree Ranch Road
Scottsdale, Arizona 85258

Executed copy of the foregoing mailed by U.S. Mail this 8th day of December, 2006, to:

Paul J. Giancola
Snell & Wilmer, LLP
400 East Van Buren
Phoenix, Arizona 85004-2202

Steve Pi-Hsiung Chow, M.D.
Address of Record